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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,003	08/22/2001	Jeffrey Herbert Woods	064157.0105	1112

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EXAMINER

LAO, SUE X

ART UNIT PAPER NUMBER

2126

DATE MAILED: 04/21/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,003

Applicant(s)

WOODS ET AL.

Examiner

S. Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-9, 11-23 are presented for examination. This action is in response to the preliminary amendment filed 8/22/2001. Applicant has amended claims 1, 5 and 8, cancelled claim 10 and added claims 11-23.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to adequately teach the claimed limitations "accepting each pending request from the buffer, in parallel, with the plurality of handler processes when the number of handler processes exceeds the number of pending requests" and "accepting a number of pending requests substantially equal to the number of handler processes when the number of pending request exceeds or equal to the number of handler processes" as recited, or similarly recited, in claims 1-9, 11-23.

In the application as filed, there does not appear to be any detailed descriptions or disclosure of accepting each pending request from the buffer, in parallel, with the

plurality of handler processes *when the number of handler processes exceeds the number of pending requests*, nor accepting a number of pending requests substantially equal to the number of handler processes *when the number of pending request exceeds or equal to the number of handler processes*. (emphasis added). In fact, in the application as filed, there does not appear to be any disclosure of comparing / determining the number of handler processes and the number of pending requests. Applicant fails to disclose "accepting each pending request from the buffer, in parallel, with the plurality of handler processes *when the number of handler processes exceeds the number of pending requests*", and "accepting a number of pending requests substantially equal to the number of handler processes *when the number of pending request exceeds or equal to the number of handler processes*" in the specification as filed.

Claims 1-9, 11-23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant recites "accepting each pending request from the buffer, in parallel, with the plurality of handler processes when the number of handler processes exceeds the number of pending requests" and "accepting a number of pending requests substantially equal to the number of handler processes when the number of pending request exceeds or equal to the number of handler processes" in claims 1-9, 11-23. There does not appear to be a written description of the claimed limitation in the application as filed, for the reasons set forth in the objection to the specification.

4. The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

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Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-9, 11-23 are rejected under the judicially created doctrine of obviousness - type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 6,360,279 to Woods in view of U.S. Patent No. 5,761,507 to Govett. Although the conflicting claims are not identical, they are not patentably distinct from each other. For example, as to claim 5, U.S. Patent No. 6,360,279 teaches operating a parallel client server system comprising: creating a plurality of handler processes with a spawner process at a server (claim 1, lines 2-6, 32-40); initializing a well-known address at the server (claim 1, lines 2-6); storing at least one request received by the well-known address in a buffer associated with the well-known address at the server (claim 1, lines 7-10); notifying, in parallel, a plurality of the handler processes that at least one request has arrived; accepting each pending request from the buffer, in parallel, with the plurality of handler processes (claim 1, lines 11-13). U.S. Patent No. 6,360,279 does not teach when the number of handler processes exceeds the number of pending requests, nor accepting a number of pending requests substantially equal to the number of handler processes when the number of pending requests exceeds or equals the number of handler processes. Govett teaches operating a client server system, including accepting each pending request with the plurality of handler processes when the number of handler processes exceeds the number of pending requests (when 'server min' is configured as two or more and one request is received, col. 6, lines 53-59), and accepting a number of pending requests substantially equal to the number of handler

processes when the number of pending requests exceeds or equals the number of handler processes (when 'server min' is configured as one and one request is arrived, col. 6, lines 16-18). Therefore, one of ordinary skill in the art would have been motivated to use the teaching of Govett with U.S. Patent No. 6,360,279 so as to support concurrent servers for clients (Govett, col. 3, lines 18-32). As to claims 1, 11, 12, 17 and 22, note discussion of claim 5 above. As to claims 2, 6, a thread is a light weight process, and thus it would have been obvious to use threads to process requests. As to claims 3, 8, 14, 19, U.S. Patent No. 6,360,279 teaches the spawner process is operable to increase or decrease the number of handler processes currently in existence at any time (claim 1, lines 32-40). As to claims 4, 7, U.S. Patent No. 6,360,279 as modified teaches each processor operable to run one or more handler processes or the spawner process (Govett, servers 1, 2, 3, M). As to claims 9, U.S. Patent No. 6,360,279 as modified teaches the initialization of the well-known address is performed by cooperation between the operating system and the spawner process [binding inherent to a spawn/fork operation]. As to claim 13, 18, U.S. Patent No. 6,360,279 teaches processing error conditions with those available handler processes that did not successfully accept a pending request when the number of available handler processes is greater than the number of pending requests (claim 1, lines 11-22). As to claim 14, 19, U.S. Patent No. 6,360,279 teaches creating a plurality of the handler processes with a spawner process and wherein the available handler processes comprise a subset of the handler processes (claim 1, lines 32-40, 11-22). As to claims 15, 20, U.S. Patent No. 6,360,279 teaches notifying comprises updating a flag and wherein the flag is accessible by substantially all the handler processes at substantially any time (claim 1, lines 23-28). As to claims 16, 21, initialization is a typical part of the binding process for a well-known address / server port. As to claim 23, U.S. Patent No. 6,360,279 teaches servicing accepted requests with those handler processes that successfully accepted a pending request; and processing error conditions with those handler processes that did not successfully accept a pending request (claim 1, lines 11-22).

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 3, 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 8 recite "to increase or decrease the number of handler processes currently in existence at any time, such operations known as load balancing". It is not clear whether applicant's load balancing equals/includes the increase/decrease, or in some other relationships. For the purpose of art rejection, it is interpreted as "to increase or decrease the number of handler processes currently in existence at any time", as best understood and as it appears to be.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-9, 11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Govett (U. S. Pat. 5,761,507) in view of Duault et al (U S Pat. 5,428,781).

As to claim 5, Govett teaches a method of operating a parallel client server system comprising:

creating a plurality of handler processes (servers / identical applications providing a particular service, col. 11, lines 42-43) with a spawner process (start another server for this service, col. 9, lines 9-13) at a server (RPC server 14);

initializing a well-known address at the server (register with portmapper the server address / port number of transaction manager XMAN 110, col. 5, lines 46-53);

storing at least one request (client request) received by the well-known address in a buffer (request queue 310) associated with the well-known address at the server (col. 6, lines 53-56);

accepting each pending request from the buffer with the plurality of handler processes (direct the request to server, col. 6, lines 53-59) when the number of handler processes exceeds the number of pending requests (when 'server min' is configured as two or more and one request is received) [it is noted that 'server min' is arbitrarily specified as a number, col. 11, lines 35-37]; and

accepting a number of pending requests substantially equal to the number of handler processes (direct the request to server, col. 6, lines 53-59) when the number of pending requests exceeds or equals the number of handler processes (when 'server min' is configured as one and one request is received, col. 6, lines 16-18) [it is noted that 'server min' is arbitrarily specified as a number, col. 11, lines 35-37].

Govett does not teach (1) notifying, in parallel, a plurality of the handler processes that at least one request has arrived, and (2) that the accepting each pending request from the buffer is performed in parallel.

As to (1) and (2), Duault teaches a method of operating a parallel client server system, including notifying, in parallel, a plurality of the handler processes that at least one request has arrived (transmit E-NE signal to all processors/processes on the signaling processor list SPL, col. 3, lines 20-22; col. 6, lines 23-39), and performing accepting each pending request from the buffer in parallel (server processes perform dequeue operations at approximately the same time, col. 4, lines 42-49). Therefore, it would have been obvious to notify in parallel, a plurality of the handler processes that at least one request has arrived in Govett, and to perform accepting each pending request from the buffer in parallel in Govett. One of ordinary skill in the art would have been motivated to do so because this would have rendered the scheduling and execution fault tolerant (Duault, col. 2, lines 38-40).

As to claim 6, a thread is a light weight process, and thus it would have been obvious to use threads to accept and process pending requests.

As to claim 7, Govett as modified by Duault teaches the plurality of processes running on a plurality of physical processors (server processes 1, 2 running on server processors 1, 2, respectively, Duault, fig. 2). Note discussion of claim 5 for a motivation to combine.

As to claim 8, Govett teaches increasing or decreasing the number of handler processes (start or stop a server) currently in existence with the spawner process (col. 12, lines 22-64).

As to claim 9, Govett teaches initializing the well-known address performed by cooperation between the operating system and the spawner process (initialization, including registering the XMAN, col. 11, lines 55-67).

As to claim 1, note the discussion of claim 5. Further, Govett's interprocess communication (communication manager) and transaction manager/XMAN form integral parts of the operating system that operates server 12' (col. 5, lines 13-25). Govett as modified by Duault further teaches (Duault) the operating system includes a notification system [It is noted that communication management and memory management are typical parts of an operating system], the notification system operable to be accessed by the handler processes (scheduler state table 11 related to the queue), the notification system further operable to reflect the existence of data in the buffer when data exists in the buffer (E-NE signal) and to reflect the non-existence of data in the buffer when the buffer is free of data (EN-E signal) (Duault, col. 8, lines 16-38). Note discussion of claim 5 for a motivation to combine.

As to claims 2-4, note claims 6, 8 and 7, respectively, for discussions.

As to claim 11, note claims 5 and 1 for discussion.

As to claim 12, note claims 5 and 1 for discussion. Govett further teaches available handler process (available servers, col. 11, line 55 – col. 12, line 18), and servicing accepted pending requests (process client requests, col. 8, lines 65-66).

As to claim 13, Govett as modified by Duault teaches processing error conditions with those available handler processes that did not successfully accept a pending request (perform dequeue on the empty queue, Duault, col. 4, lines 51-52), and note

discussion of claim 5 for when the number of available handler processes is greater than the number of pending requests.

As to claim 14, Govett teaches creating a plurality of the handler processes with a spawner process (start another server for this service, col. 9, lines 9-13). In Govett, the available handler processes comprise a subset of the handler processes because the handler processes include available/activated as well as idle handler processes.

As to claim 15, Govett as modified by Duault teaches (Duault) updating a flag (scheduler state table 11, fig. 7) and wherein the flag is accessible by substantially all the handler processes at substantially any time (col. 5, lines 4-6; col. 8, lines 16-38). Note claim 5 for a motivation to combine.

As to claim 16, initialization (binding) is a typical part of providing a well-known address [such as the fork-exec operation]. Govett also teaches initializing the well-known address (XMAN address) (registering the XMAN address, col. 11, lines 55-67).

As to claim 17, it is a program product claim of claim 12, thus note claim 12 for discussion.

As to claims 18-21, note claims 13-16, respectively, for discussions.

As to claim 22, note claim 12 for discussion.

As to claim 23, Govett as modified teaches servicing accepted requests with those handler processes that successfully accepted a pending request (Govett, process client requests, col. 8, lines 65-66); and processing error conditions with those handler processes that did not successfully accept a pending request (Duault, perform dequeue on the empty queue, col. 4, lines 51-52).

10. Applicant's arguments filed 8/22/2001 have been considered but are moot in view of the new ground(s) of rejection.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The examiner's supervisor, SPE Meng-Ai An, can be reached on (703) 305 9678. The examiner can normally be reached on Monday - Friday, from 9AM to 5PM. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Sue Lao 

April 16, 2004